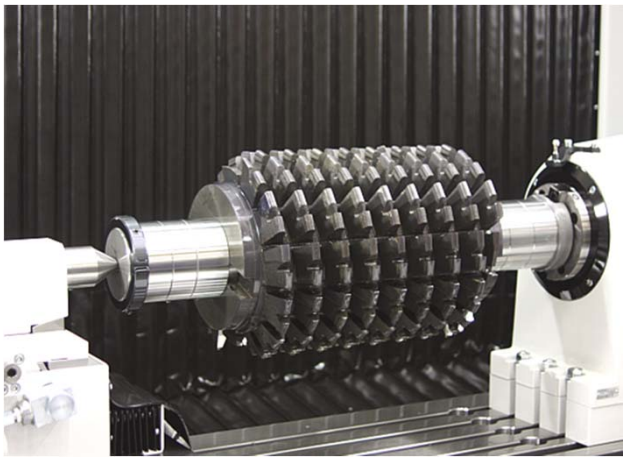
Gear Hob with alternate tooth depth

A12-010

Gear Hobs are high performance tools which are used for mass gear production in hobbing process. Due to the tool design and the process itself, the tooth tip on Gear Hobs is the most burdened part of the tool. Alternate tooth depth provides the possibilty to increase the number of cutting edges and unload the edge from heavy duty without loosing too much chip space on the flute ground. These tools are also known as "Easyhob", "Varicut", "Doublecut" etc. Non-spiral hobs can be sharpened using the straight or angled side of a cup wheel.



1. Cycletime for Production

Tool specifications Diameter 250 mm, Z 24, Length of cutting edge 320 mm Material HSS					
Operations	 Probe	 Dress	 Sharpen	 Flute 1	 Flute 2
Feed [mm/Min]	2000	400	200	3500	1200
Power [kW]		2	1	10	5
Wheel speed [m/s]		33	33	33	33
Used wheels		 6A2	 6A2	 6A2	 6A2
Grinding time [s]	30	60	60	4126	2200
Total cycle time	~ 108 min				

Flute 1= Roughing

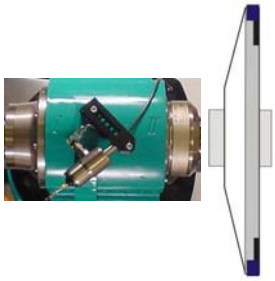
Flute 2 = Finishing

Total removal = 0.3mm

The mentioned cycle times are indicative. The material to be ground, different grinding wheels or other coolants can influence the cycle times considerably.

2. Used Grinding Wheels

6A2 / 12C9 90° CBN Ø250 B91



3. Machine and Software Requirements

Machines: 5 axes CNC grinder: Corvus GDS
Control: Fanuc 31i
Coolant: Synthetic Oil, pressure 6 bar
Software: Quinto 5

responsible engineer: SIW, 12.2008

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